AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of the claims in this application.

Please cancel claims 1-20 without prejudice or disclaimer.

Listing of the Claims:

1-20. (Canceled)

21. (New) A method for producing radially perforated, cylindrical propellant tubes which method comprises fixing and centering each propellant tube between its own open ends, and perforating each propellant tube in several stages in a number of consecutive perforation operations by means of one or more movable perforation pins capable of being displaced radially in a pin die relative to each propellant tube through the wall of each propellant tube, which perforation pins are returned after each perforation to their initial positions before perforation, in which position the pin die and the propellant tube are displaced relative to each other so that the pins, on the next occasion on which they are activated, perforate an unprocessed area of a propellant tube, and in conjunction with which the sum of all the perforations after the operation is complete gives an all-over perforation with a desired e-dimension between all the perforations, wherein the e-dimension corresponds to the distance for which a propellant is able to burn from the time of ignition until the time at which the propellant exists from a barrel, with complete combustion during dynamic pressure sequence in a particular artillery piece for which the propellant is intended.

22. (New) Method in accordance with Claim 21, which comprises controlling the relative displacement of the pin die and the propellant tube between two perforation stages axially, radially or both of these, in such a way that all the perforations, after the perforation

operation has been completed in its entirety, will lie at a distance from one another equivalent to the desired e-dimension for the intended application of the propellant tube.

23. (New) Method in accordance with Claim 21, which comprises displacing the pin die, between the perforation stages, in a linear fashion along the entire length of the propellant tube until such time as the whole of that length is covered by perforations, after which rotating the propellant tube about its longitudinal axis through an angle that corresponds to the desired e-dimension, at the same time as which the longitudinal position of the pin die is corrected so that new, unprocessed material faces towards the pin die, and any additional perforations will then lie at an e-dimension distance from the previously executed perforations, after which perforating an unprocessed part of the propellant tube in a corresponding fashion followed by further rotating and longitudinally correcting the propellant tube until such time as it has been perforated in its entirety with the desired e-dimension distance.

24. (New) Method in accordance with Claim 21, which comprises a feed stage between the perforation operations affecting the propellant tube and the pin die, and distributing the feed stage by a rotation of the propellant tube and a lateral feed of the pin die that are selected in such a way that the perforation of the propellant tube will run in a spiral path around it from its one end to its other end, after which a new spiral path at a distance of one e-dimension from the first begins, until the whole of the propellant tube has been covered by perforations at distance of one e-dimension from one another.

25. (New) Method in accordance with Claim 21, which comprises executing mutual relative feed of the pin die and the propellant tube by a controlled rotation of the propellant tube until one revolution has been covered by perforations, after which the pin die is fed for one e-dimension to permit the execution of the next perforation revolution.

26. (New) Method in accordance with Claim 21, which comprises using a pin die with several pins arranged in a row after one another at an e-dimension distance from one another in the longitudinal direction of the propellant tube as the pin die, in conjunction with which the longitudinal feed of the pin die in the longitudinal direction of the propellant tube

between each perforation stage is equivalent to the number of e-dimensions covered by the pins in the die.

27. (New) Method in accordance with Claim 21, which comprises controlling the feed of the pin die and/or the rotation of the propellant tube by gauge blocks, against which fixed abutments come into contact.

28. (New) Method in accordance with Claim 21, which comprises controlling the feed of the pin die and the rotation of the propellant tube by a microcomputer.

29. (New) Arrangement for the execution of the method in accordance with Claim 21, for the perforation of propellant tubes with the perforations distributed uniformly over the entire propellant tube at an e-dimension distance from one another adapted for the propellant having regard for its rate of combustion and its intended application, which comprises, in a fixing device intended for the fixing and axial alignment of propellant tubes, capable of displacement relative to one another and capable of being introduced into the open ends of the respective propellant tube for centering the propellant tube and for clamping the propellant tube, and at least one pin mounted in a pin die and capable of displacement in the same to and from the outer surface of the respective propellant tube in its clamped position and through at least the major part of its wall, in conjunction with which the pin die and the respective propellant tube are connected together in such away as to permit movement, so that, after each and every one of the perforations of the wall of the propellant tube by the pins and after the pins have been returned to the position before the perforation operation, the pin die and the propellant tube are displaced relative to one another so that new propellant material is exposed under the pin die for its next perforation stage.

30. (New) Arrangement in accordance with Claim 29, which comprises a plurality of pin dies arranged around the clamping position of the propellant tube and also arranged that the pin dies perforate the propellant tube with their pins arranged therein from mutually opposing directions.

31. (New) Arrangement in accordance with Claim 29, which comprises support rollers, against which the clamped propellant tube makes contact in order to prevent downward deflection.

32. (New) Arrangement in accordance with Claim 29, which comprises an internal abutment , which does not obstruct the passage of the pins in the pin die through the propellant tube, arranged on the inside of the propellant tube.

33. (New) Arrangement in accordance with Claim 32, wherein the internal abutment is a tube so arranged as to hold the propellant tube horizontally.

34. (New) Method in accordance with Claim 22, which comprises displacing the pin die, between the perforation stages, in a linear fashion along the entire length of the propellant tube until such time as the whole of that length is covered by perforations, after which rotating the propellant tube about its longitudinal axis through an angle that corresponds to the desired e-dimension, at the same time as which the longitudinal position of the pin die is corrected so that new, unprocessed material faces towards the pin die, and any additional perforations will then lie at an e-dimension distance from the previously executed perforations, after which perforating this previously unprocessed part of the propellant tube in a corresponding fashion followed by further rotating and longitudinally correcting the propellant tube until such time as it has been perforated in its entirety with the desired e-dimension distance.

35. (New) Method in accordance with Claim 22, which comprises a feed stage between the perforation operations affecting the propellant tube and the pin die, and distributing the feed stage by a rotation of the propellant tube and a lateral feed of the pin die that are selected in such a way that the perforation of the propellant tube will run in a spiral path around it from its one end to its other end, after which a new spiral path at a distance of one e-dimension from the first begins, until the whole of the propellant tube has been covered by perforations at distance of one e-dimension from one another.

36. (New) Method in accordance with Claim 22, which comprises executing mutual relative feed of the pin die and the propellant tube by a controlled rotation of the

propellant tube until one revolution has been covered by perforations, after which the pin die is fed for one e-dimension to permit the execution of the next perforation revolution.

37. (New) Method in accordance with Claim 22, which comprises using a pin die with several pins arranged in a row after one another at an e-dimension distance from one another in the longitudinal direction of the propellant tube as the pin die, in conjunction with which the longitudinal feed of the pin die in the longitudinal direction of the propellant tube between each perforation stage is equivalent to the number of e-dimensions covered by the pins in the die.

38. (New) Method in accordance with Claim 23, which comprises using a pin die with several pins arranged in a row after one another at an e-dimension distance from one another in the longitudinal direction of the propellant tube as the pin die, in conjunction with which the longitudinal feed of the pin die in the longitudinal direction of the propellant tube between each perforation stage is equivalent to the number of e-dimensions covered by the pins in the die.

39. (New) Method in accordance with Claim 24, which comprises using a pin die with several pins arranged in a row after one another at an e-dimension distance from one another in the longitudinal direction of the propellant tube as the pin die, in conjunction with which the longitudinal feed of the pin die in the longitudinal direction of the propellant tube between each perforation stage is equivalent to the number of e-dimensions covered by the pins in the die.

40. (New) Method in accordance with Claim 22, which comprises controlling the feed of the pin die and/or the rotation of the propellant tube by gauge blocks, against which fixed abutments come into contact.